IEP Project: Nutrient loads and transformations in the Delta

Source: C. Benton

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Jassby and Cloern 2000
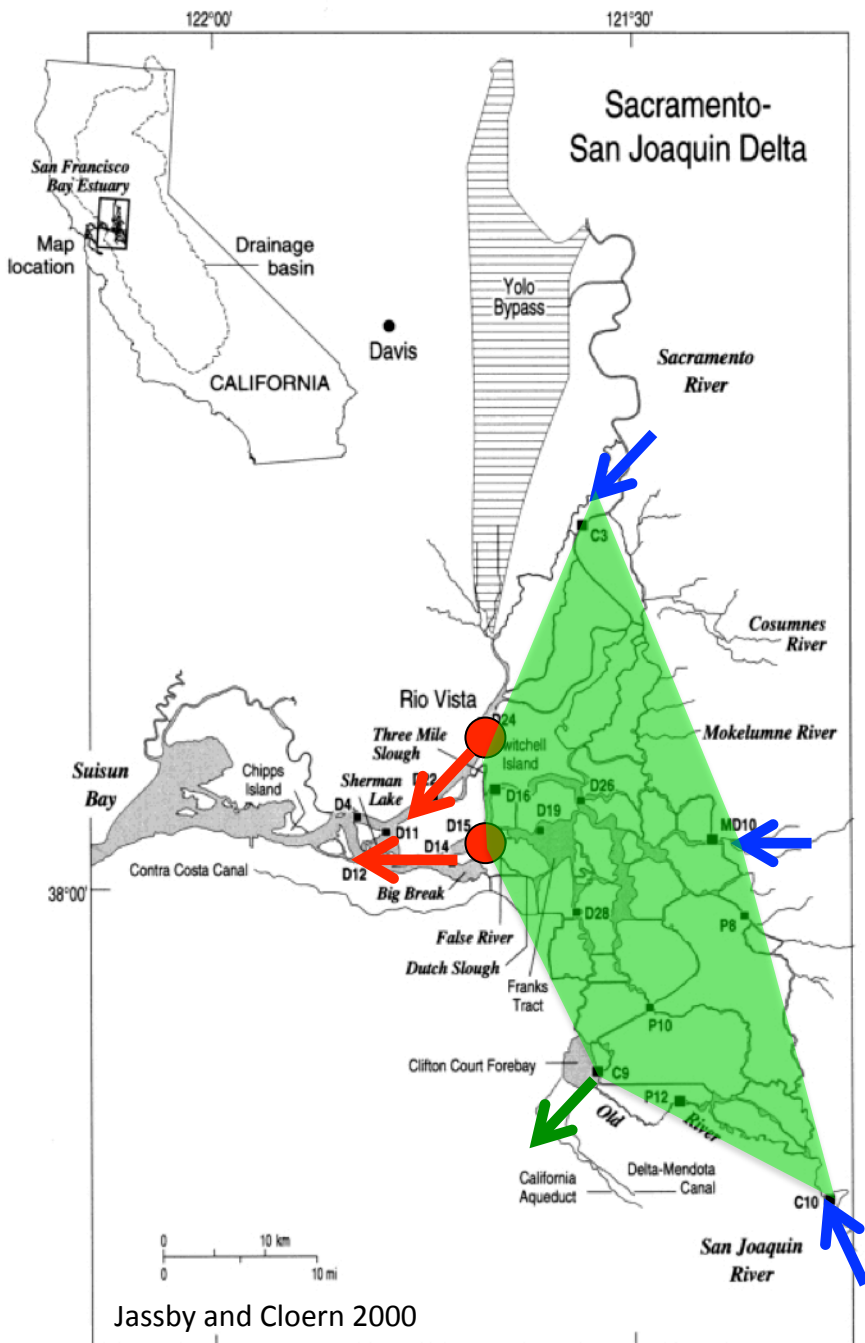
# Quantifying Delta N and P transformations and exports

Funder: IEP
Collaboration: SFEI (Novick, Senn), RMA (Guerin), USGS (Kendall)

Approach…

1. Spatial and temporal analysis of DWR/IEP nutrient data

2. Use monitoring data and flow estimates to quantify loads into and out of Delta, and budget

3. Calibrate hydrologic/WQ model (DSM2-QUAL)

4. Use simulation modeling to quantify transformation rates under varying conditions: past, future

    -   hydrology, diversions

    -   changes in loads

NH4 Budget: Delta

- Substantial NH4 'loss'...nitrification
  - annual avg = 60%
  - max = 90%
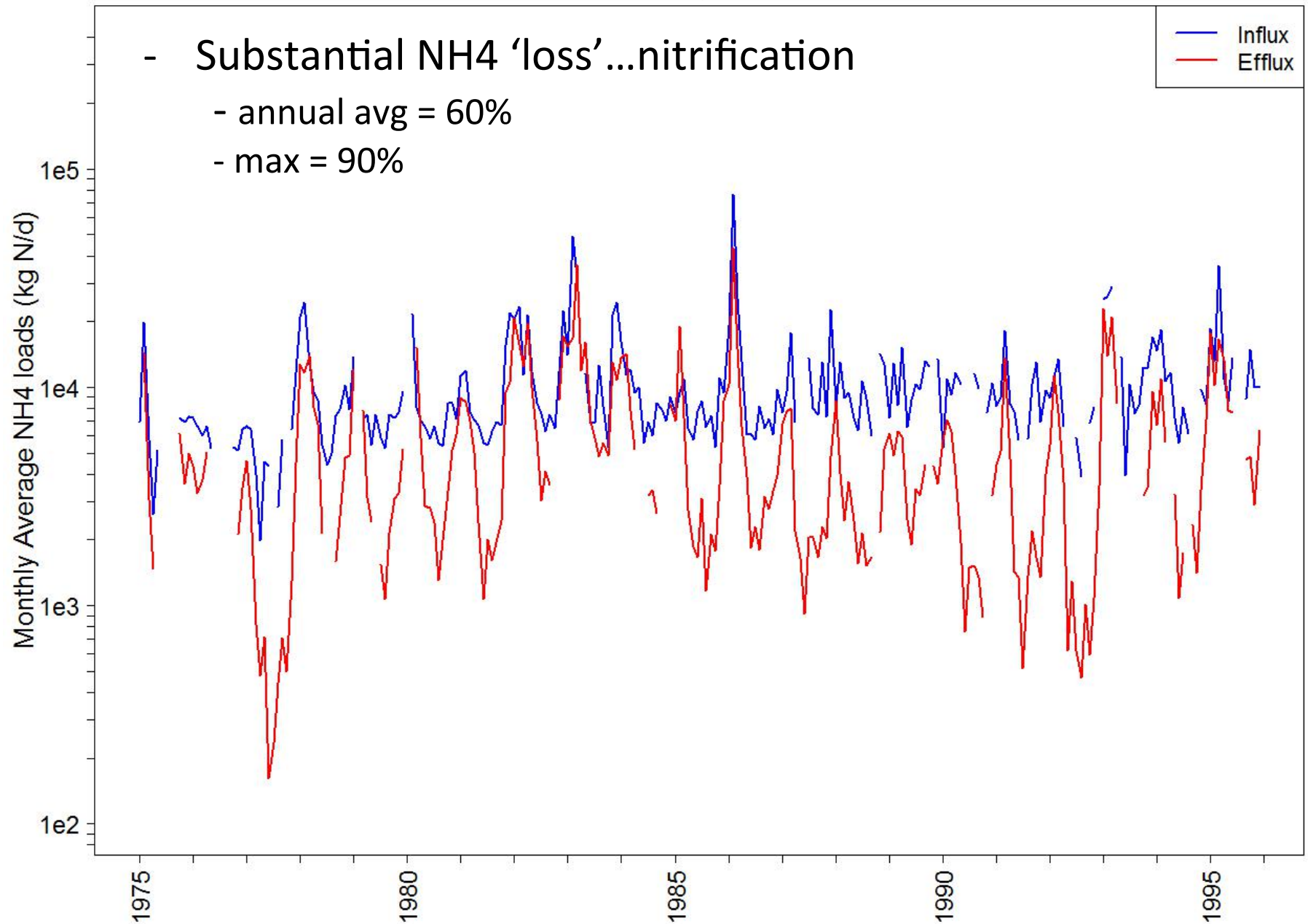
What happens within the Delta?
        - where and when do transformations/losses occur?
        - what conditions favor transformations/losses?

EMP's Discrete Water Quality Stations

C3 – 12 km downstream of SacRegional

D19 – Franks tract.
Primarily Sacramento water

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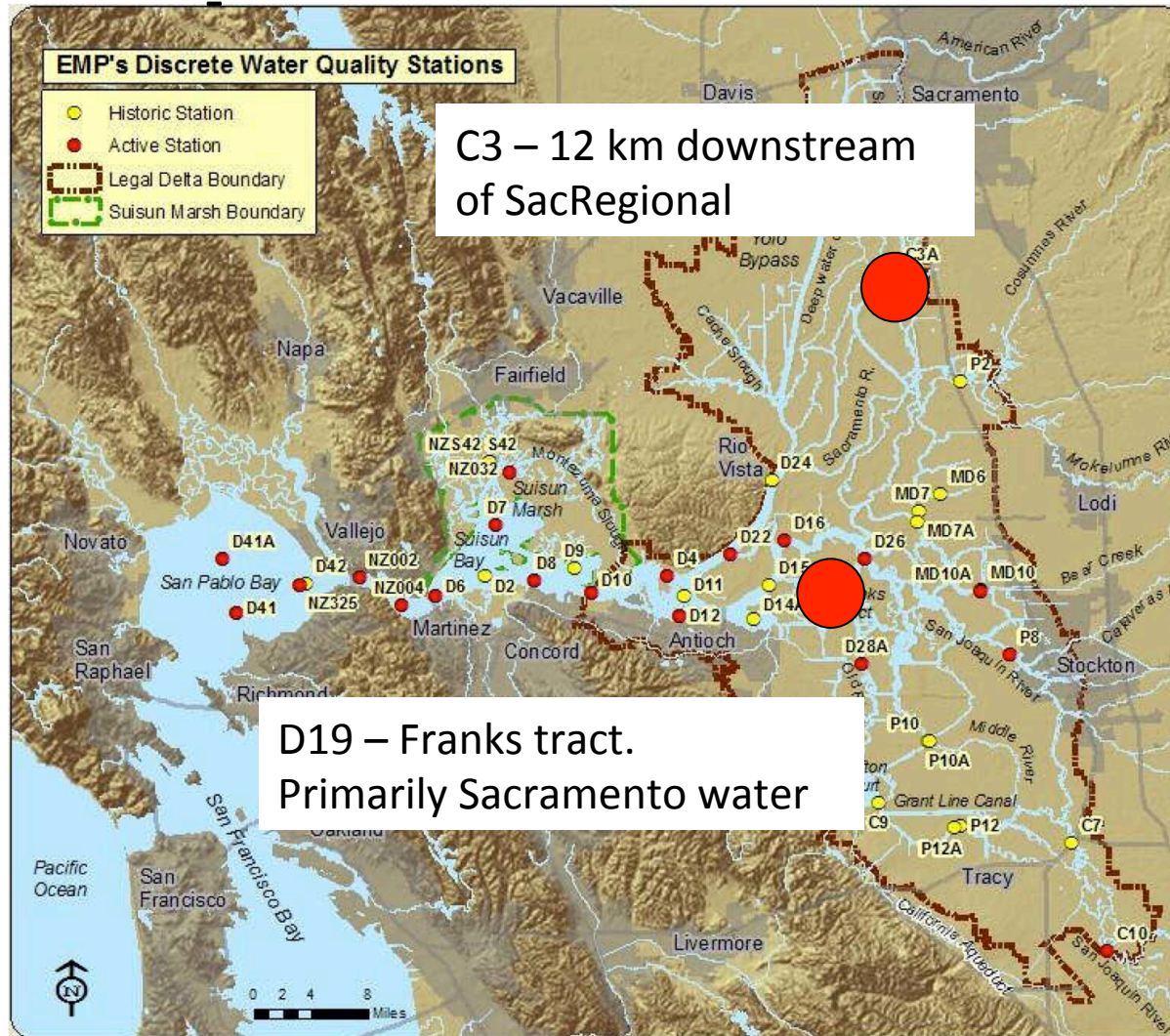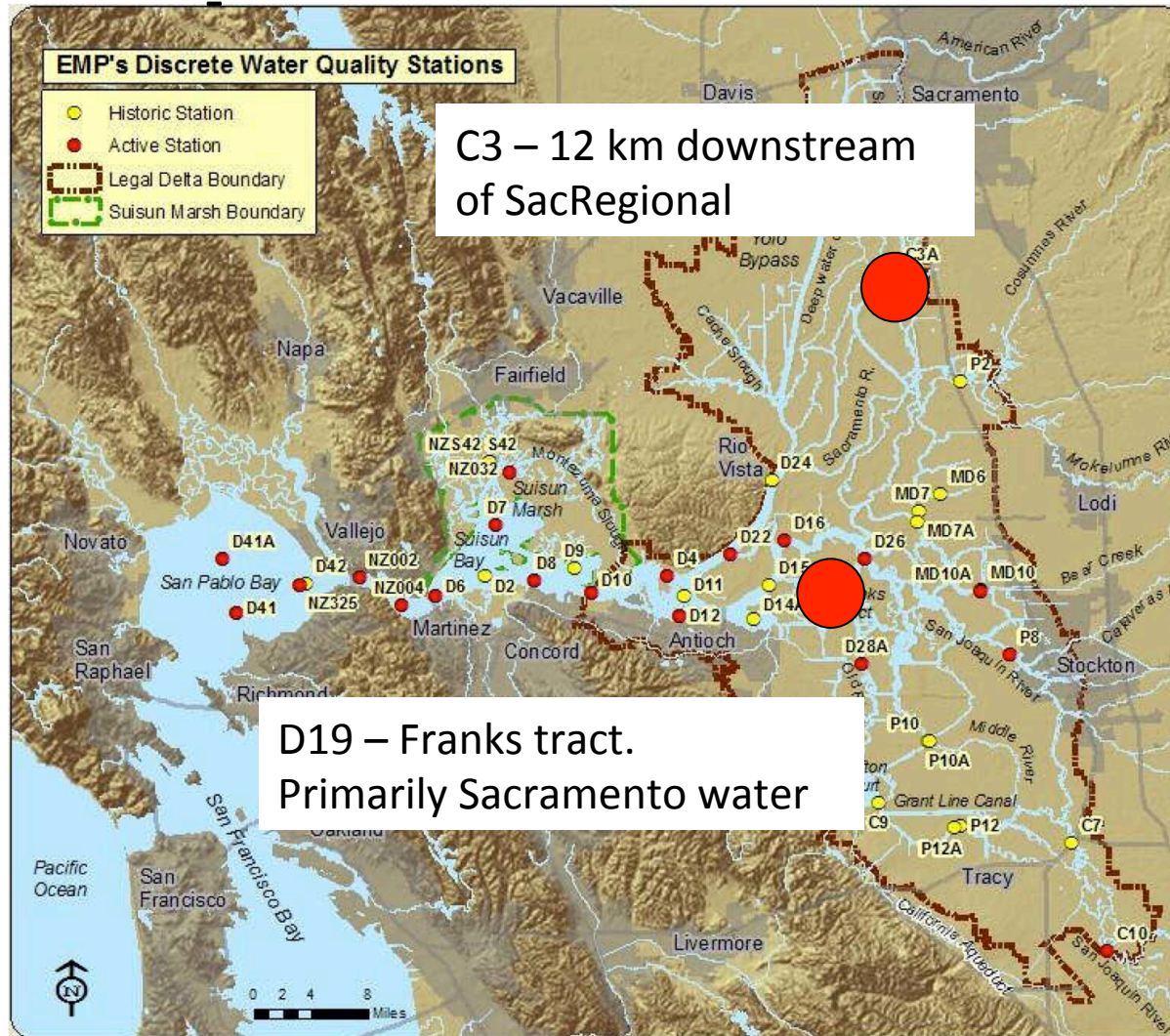
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Key building block for phytoplankton modeling and acceptable loads

EMP's Discrete Water Quality Stations
○ Historic Station
● Active Station
▨ Legal Delta Boundary
▨ Suisun Marsh Boundary

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